

USAWC STRATEGY RESEARCH PROJECT

COMMAND DECISION-MAKING: EXPERIENCE COUNTS

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## ABSTRACT

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Decision-making is the mainstay of military leadership and command. Due to the changed nature of the current military environment, military commanders can no longer rely solely on the traditional Military Decision-making Process (MDMP). Instead, commanders must adapt decision-making processes to overcome the uncertainty of a rapidly changing military environment.

Since the end of the Cold War, the military environment has transformed into one characterized by asymmetry, uncertain threat, unconventional tactics, technological advancement, and an enemy that can no longer be scripted. The commander's environment is filled with external stressors that influence how and why decisions are made. The MDMP simply does not suit the current military environment.

The purpose of this project is to identify current external influences on command decision-making and investigate how these influences have necessitated a change in a commander's decision-making processes. In addition, the author discusses the relationship between the stressors and the commander's reaction to these stressors with regard to decision-making. It is this relationship that has been a catalyst for change in command decision-making that reflects the need for a more flexible decision-making alternative. Gary Klein's Recognition-Primed Decision Model (RPD) is a plausible model that lends itself to an adaptive approach to decision-making that is more in tune with the uncertainty of today's military environment.



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## COMMAND DECISION-MAKING: EXPERIENCE COUNTS

Decision-making in combat is all about intuition and gut reaction.

—Lieutenant General David Petraeus

These words from LTG Petraeus reflect a senior leader's view on the intensity of decision-making in an uncertain environment and the way that decisions under these conditions are often made. This acknowledgement of intuitive decision-making is strikingly different than the more traditional analytical decision-making process the military has relied on in the past, yet both have application in today's uncertain military environment. The deliberate decision-making process is a prescriptive format which focuses on linear procedures to identify the problem, develop courses of action, compare courses of action, and then finally, select a course of action for execution. This deliberate decision-making process served the military well in the Cold War environment where the timeline and informational requirements associated with planning warfare were more predictable. Today's environment of decisive operations is not at all predictable and certainly not slow. In fact, the environment may be categorized as volatile, uncertain, complex, and uncertain (VUCA), often referred to as the naturalistic environment.<sup>1</sup> Command decision-making today is significantly affected by the environment in which commanders make decisions and necessitates greater reliance on experience and intuition for successful decision-making.

This essay first discusses elements of the traditional military decision-making process (MDMP) and some of the reasons why a procedural-based deliberate decision-making process is not always effective. The notions of intuition, expert knowledge and experience are presented as the basis for decision-making in the naturalistic environment. These concepts are embedded in Gary Klein's Recognition-Primed Decision Model (RPD) which is reflective of the way people actually solve problems. The model describes decision-making as the combination of environmental awareness, the influence of intuition, mental simulation, and experience as sources of power to strengthen the decision-making process. The ability to apply expert experience to decision-making and to hone intuition is something that may be realized over time through training and education. This essay looks at opportunities for the U.S. military to capture experience based decision-making and to incorporate these examples into institutional doctrine, education, and training systems in order to improve the decision-making abilities of commanders.

## **TRADITIONAL MILITARY DECISION-MAKING**

The United States military has relied on the traditional military decision-making process (MDMP) as the mainstay deliberate process. This process is analytical and prescriptive in nature and heavily reliant on procedure to ensure that the process results in the best possible or optimal course of action each time.<sup>2</sup> This approach is systematic and methodical and allows for the breakdown of the situation into manageable tasks so that all aspects of the issue are carefully analyzed and evaluated. While the MDMP has demonstrated effectiveness in long term planning situations, the nature of the strict process poses risks to the decision outcome. These risks are primarily due to the fact that humans can not possibly know all the potential outcomes to a situation so it is impossible to plan for every eventuality. The literature terms this phenomenon as “bounded rationality” or limitations in an individual’s ability to accurately judge all the information associated with a particular situation.<sup>3</sup> Although a decision-maker may attempt to use a formal process such as the MDMP, they are limited in their ability to develop the optimal course of action due to biases that humans possess. Another outcome of the MDMP involves the restriction of ideas at the outset of the process thereby limiting the breadth or scope of the potential solutions. Known as convergent thinking, this narrowing of options early in the decision-making process results in limiting potential solution generation.<sup>4</sup> In today’s decisive operations environment, commanders can not afford to become mired down in an overly analytical decision-making process that may become bogged down in procedure.

## **NATURALISTIC DECISION-MAKING ENVIRONMENT**

An alternate approach to analytical decision-making is descriptive in nature and unleashes the realities of the current decision-making environment facing the military. This differing explanation of decision-making is the naturalistic or intuitive theory of decision-making. The theory is based on the premise that people use less formal, but much faster decision-making strategies in real time situations.<sup>5</sup> There are three underlying concepts of this theory. The first concept is decisions are made by sequential assessment of courses of action as opposed to comparison of courses of action. The second concept is the decision maker uses recognition-based processes to create courses of action and to compare the options to prior experiences or cues that may be similar. In this way, the decision maker can apply appropriate aspects of previously used courses of action in repeated situations. The third concept is the course of action chosen is selected for its “good enough” characteristics, not because it is the best course of action.<sup>6</sup> These concepts accept that in real time situations, where time is limited and the decision-making process is rapid, the solution may be first one executed that is able to get the

job done even though it may not have been the most optimal solution. This concept is also known as satisficing.<sup>7</sup>

The naturalistic or intuitive theory describes the environment in which decisions are most often made. The environmental attributes relate to time, high stakes, inadequate information, ill-defined goals, and procedures all occurring in a context that involves higher and lower level implications.<sup>8</sup> This environment is characterized by certain conditions that impact the decision maker and certainly can be applied to the uncertain, rapidly changing military environment that commanders are experiencing today. The first characteristic of time reflects the volatile nature of a situation that is consistently evolving. In general, limited time forces the decision-maker to rapidly make decisions. Military operations in the execution phase either in support of the war on terror or in response to a large-scale natural disaster are inherently time constrained resulting in short decision-making timelines. Secondly, the situations presented in a naturalistic or VUCA environment are generally complex and involve high stakes or outcomes that could have serious impact to the situation if not addressed appropriately. A military commander is responsible for the nations' most treasured resources, its sons and daughters. A commander's failure could equate to personnel injury and at worst, loss of life.

The naturalistic environment is also characterized by uncertainty due to the limited information available concerning a situation. This may be due to inadequate information channels, too much information to assimilate, or information that is just plain erroneous. The current military environment is also characterized by this attribute due to the increased available information technology, the scope of the information requests and needs, and the ability to procure real time information. A commander must quickly absorb the volume of information and convert it into a useable form. A commander is not alone in this process as a command staff must also be able to assimilate, analyze, and provide information to the commander.

The next set of characteristics of a naturalistic environment is concerned with ill-defined goals and poorly defined procedures. This implies that the pending decision is related to an end state that is unknown or ambiguous and that the methods of reaching the end state are equally unknown or ambiguous. These characteristics are clearly evident in recent military operations in Operation Iraqi Freedom (OIF) against an insurgency that has proved to be determined and calculating. Broadly viewed, this uncertainty in ends, ways and means could be applied to the full spectrum of operations in the Global War on Terror.

The naturalistic theory presents the premise that the decision maker will be more effective with gained experience and the ability to recognize cues in the environment that assist the decision-making process.<sup>9</sup> The assertion is that decision makers who are experienced are more

likely to be trusted with making decisions in highly unpredictable, high stakes situations that are characterized in the naturalistic environment. Such decision makers have experience that allows for recognition of environmental cues, patterns and distinctions which allow for more rapid decision-making. In the military, commanders are selected to command because of their past experience and for their abilities to successfully navigate unpredictable situations.

Experience counts when making decisions in a naturalistic environment.

### **WHY POOR DECISIONS ARE MADE**

In understanding decision-making, it is important to identify potential reasons why poor decisions are made. Klein presents that "a person will consider a decision poor if the knowledge gained would lead to a different decision if a similar situation arose."<sup>10</sup> It is more important to know what failed to be considered rather than to know that the outcome of the decision was not favorable. In the naturalistic theory viewpoint, Klein and others believe that poor decisions are caused by three primary factors: inexperience, lack of information, and a factor termed the "de minimus" error. The "de minimus" error is the act of explaining away evidence that warns of an impending problem.<sup>11</sup> In summary, the lack of experience of the decision maker results in their inability to gather enough necessary information and to notice weaknesses in their course of action.<sup>12</sup>

Although not embraced by the naturalistic viewpoint, other research on decision-making errors discuss a more analytical perspective of errors resulting from biases in the way we think. Research in this area concludes that people rely on simplifying strategies called heuristics or "rules of thumb" when making decisions and that over reliance on these rules cause bias that can negatively affect decision outcomes.<sup>13</sup> Examples of bias include the tendency to influence judgment of current events in comparison to previous incidents that are more easily remembered, occur more often, or occur in conjunction with another event. Overconfidence of the decision maker is also a type of bias as it creates a sense of infallibility in the decision maker.<sup>14</sup> These biases limit the decision maker's ability to consider all options available and consequently may hinder the decision process. Ideally, an experienced decision maker would be astutely aware of their individual biases when making a decision so that the impact of the bias on the decision is mitigated.

### **THE RECOGNITION-PRIMED DECISION MODEL**

Reduction of decision error is part of Gary Klein's Recognition-Primed Decision (RPD) Model. The origin of RPD stemmed from research that recognized that there were human strengths and weaknesses that impact how well people do under adverse decision-making

conditions. The cornerstone of the model is the fusion of two processes: the way decision-makers size up the situation to recognize which course of action makes sense and the way that the decision maker evaluates the course of action by imagining the execution of that course of action.<sup>15</sup>

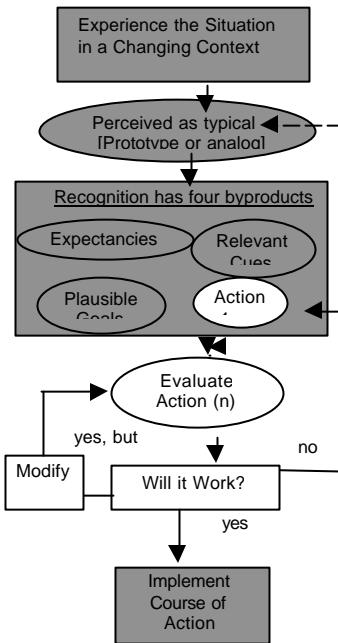


FIGURE 1. RECOGNITION-PRIMED DECISION MODEL<sup>16</sup>

In describing the model in Figure 1, the decision maker identifies the event as typical or familiar from past experience and begins to take action. If the situation is a prototype, not familiar or analogous to something previously experienced, the decision maker must further diagnose the situation to gather more information and clues to best match the situation. The decision maker then determines the goals for the outcome of the event so that priorities for action are developed. The decision maker filters irrelevant information, identifies what likely will come next in the event, and identifies ways to respond to the event based on previous successful experience. Subsequently, the decision maker develops the first course of action

that is perceived likely to succeed. The decision maker then imagines how the course of action will evolve through a process of mental simulation. Mental simulation allows for sequential assessment of the course of action, identification of any potential problems, and if necessary, course of action adjustment. This process of refinement incorporates changes made during the mental simulation and makes the course of action stronger. If the problems seem insurmountable, the decision maker will discard the course of action, select another course of action, and repeat the steps in the model. Finally, the decision maker will implement the action.

The RPD model was developed via extensive analysis of personal testimonials from high stakes decision makers such as firefighters, nurses, and military leaders and is a description of how people actually make decisions. The outcome is that the first course of action initiated and developed by experienced decision-makers is usually the one that can adequately solve the problem at hand. The decision-maker does not refuse to develop multiple courses of action, as dictated in the MDMP, but instead does not compare the multiple courses of action with each other. Again, this satisficing approach to decision-making reflects how people actually make decisions.

### **SOURCES OF POWER**

Also described in Klein's theoretical framework are the sources of power that a decision maker uses when making decisions. These include the power of intuition, mental simulation, the power to see the invisible, the power of stories, and the power of metaphors and analogies. These sources of power may be developed and strengthened over time with experience.

The first source of power is intuition. Klein defines intuition as the "use of experience to recognize key patterns that indicate the dynamics of a situation."<sup>17</sup> This includes recognizing what isn't happening as well as what is happening in a situation as both scenarios provide clues to the event. This ability comes from experience. In military terms, this equates to improved situational awareness and the innate ability of a commander to instinctively react on the battlefield. Developing tools and techniques to hone intuition capitalizes on the potential for improved situational awareness for commanders.

The Clausewitz term for intuition is "coup d'oeil" or the ability to use an inward eye to quickly recognize the truth.<sup>18</sup> Duggan discussed the Clausewitz interpretation of intuition at length in his work *Napoleon's Glance*. He suggested that in successful decision-making, people do not know what problem they can solve until they first see how to solve it. The "how" stems from expert intuition and expert intuition stems from experience.<sup>19</sup> There is a difference between ordinary intuition and expert intuition and it relates to the knowledge gained from past

experience in similar situations. Decision makers will sequentially consider possible courses of action, what the course of action might achieve, and ultimately stop at the one that will solve the problem.<sup>20</sup> Expert intuition is a combination of coup d'oeil, presence of mind, knowing history, and resolution. Coup d'oeil is the ability to quickly recognize what is happening, presence of mind is the ability to be prepared for the unexpected, and resolution is the ability to stay the course.<sup>21</sup> The synergy of these attributes plus an understanding of history defines expert intuition. Military commanders today can benefit by intensive study and reflection on previous military operations, not to fight the last war, but to assess and integrate the details of previous events in order to draw upon them and combine them in new ways when confronted by a similar situation.

The next source of power in Klein's model is mental simulation. This is the ability to "imagine people and objects consciously and to transform those people and objects through several transitions, finally picturing them in a different way than at the start of the process."<sup>22</sup> This is the integration of the decision makers' ability to be intellectually creative and innovative. In the RPD model, mental simulation is used for three reasons. First is the need to evaluate a course of action so that modifications may be made if errors are noticed. Secondly, simulation allows for some predictive ability to determine what the expected outcome of an action will be and finally, simulation is a method for course of action rehearsal. The challenge for decision makers is to remain acutely aware of simulation details that arise and may not fit the expected pattern. In this instance, there is no substitute for a commander's presence at the point of decision in order to be able to witness the reality of the situation.

Another source of power for a decision maker is the power to see the invisible. This source of power is related to the development of expertise in a particular area. Because of their vast experience, experts are able to see pieces of the event that are not perceptible to someone with less experience or expertise. In combination with intuition, simulation and situational awareness, perceiving the details allows the decision maker to detect patterns or anomalies in a situation, however slight, that a novice would overlook.<sup>23</sup> Experts also tend to be more comfortable with the VUCA environment and consequently are able to better understand and accept personal limitations with regard to a particular body of knowledge. Experts are more likely to readily realize when the situation exceeds their capabilities. In the chaos of today's military operating environment, the value of building expertise as quickly as possible needs to be a leadership imperative.

Klein describes the power of storytelling as an additional source of power. Again, he claimed that decision makers combine ideas, concepts, objects, and relationships into the

format of storytelling in order to help understand the lessons learned by experiencing an event.<sup>24</sup> The more often the story is told, the better the understanding as it reinforces the learning by establishing links among pieces of information that are more easily remembered and comprehended by the storyteller and the listener.

Another method of organizing information is by using analogies and metaphors to describe a situation or event. These verbal tools allow a decision maker to frame information in a familiar format for clearer understanding. It also allows the decision maker to link previous experience with current events in order to predict a future event. This method has been embraced by the media and some political leaders in the United States in their effort to compare the events in Iraq to the events in Vietnam. A more thoughtful approach to assessing Iraq with regard to Vietnam may be found in the Strategic Studies Institute (SSI) monograph by Jeffery Record and W. Andrew Terrill. They expertly evaluated the similarities and differences of the American experience in Iraq and Vietnam and suggested that the differences outweigh the similarities.<sup>25</sup> While one must be cautious in applying metaphors and analogies, it is clear that decision makers must be able to assess the validity of this method of storytelling so that it enhances and not impedes the decision-making process. Metaphors and analogies such as the one comparing Iraq to Vietnam are powerful and can have lasting influence on perception and understanding of a situation.

### **IMPLICATIONS FOR LEADER DEVELOPMENT**

The RPD model and sources of power described have enormous relevance to leader development in the military. Intuition, simulation, and storytelling may be learned and assimilated into leadership training opportunities and doctrinal content at all levels of the military: tactical, operational, and strategic. The goal is to promote the development of expert intuition by expanding the depth of experience of a decision maker. This would involve the enhancement of training resources such as simulations, case studies, and exercises to promote intuitive thought.

In 2003, the Battle Command Battle Laboratory (BCBL) at Fort Leavenworth, KS applied the RPD model in a two week experiment. The participants included active duty military and retired military personnel in a notional brigade staff organization. The case study involved a detailed scenario and the experiment began with two days of training on the RPD model and tools. The notional staff executed the decision-making process using electronic decision games.<sup>26</sup> The findings of the experiment revealed the participants' impressions of military decision-making processes.

The participants in the experiment found that using the RPD model was easy and represented “doing what they always did.”<sup>27</sup> In addition, they estimated that using the RPD model decreased the planning time that they would have used with the MDMP by approximately 30%.<sup>28</sup> These observations supported Klein’s primary premise that the RPD model represents the way decision-makers typically make decisions and that the time constraints associated with the naturalistic environment necessitate shorter decision-making windows. Additional comments from the participants included the benefit of knowing the preferred course of action in conjunction with the mission analysis reflecting the commander’s input at the onset of the process. The participants agreed that even if the commander spent only a short time presenting a clear intent regarding the situation in the early phases of planning, it was preferable to not having that input and trying to fix things later in the planning cycle.<sup>29</sup> These results represent the parallels between the RPD and the commander’s estimate phase of the MDMP where the commander visualizes the mission and provides initial guidance. This emphasizes the need for commanders to have a firm understanding of their intent for the conduct of operations early in the process and the ability to effectively communicate that intent to a planning staff.

Another interesting outcome of the experiment was the participants’ overwhelming support of a mental simulation concept called a pre-mortem rehearsal. This rehearsal is the RPD model tool for identifying critical flaws in a plan as a way of countering a commander’s potential flaw in intuition.<sup>30</sup> The model offers rehearsal as an optional tool, yet the military participants valued it so much that they used it as often as possible in the exercise. This outcome suggests the desire for members of a commander’s staff to have the opportunity to reflect and provide insight into a commander’s plan early and often in the process.

While not uniformly accepted by the participants as the future decision-making framework for the military, the RPD model experiment at BCBL demonstrated a positive application of the model to a military decision process and the willingness of the military to address shortfalls in the MDMP decision-making process. The experiment also demonstrated that the tenets of the RPD model can be incorporated successfully into a military training environment.

Although not formally incorporated into the Army education structure, evidence that the naturalistic or VUCA environment is expected to persist as a factor in decision-making and planning is apparent at the Joint Staff level. Currently, officers in the Joint Operational War Plans Division are developing an innovative “Adaptive Planning” process that is targeted to reduce the deliberate decision-making process for strategic level contingency plans to one year or less.<sup>31</sup> This change, directed by the Secretary of Defense, complements the use of the RPD model in the crisis action decision-making environment and signals awareness at the highest

level of the need to better refine the longer term decision-making processes as well. This necessitates developing senior leaders who have the expertise and experience to be adaptive decision makers.

The United States Marine Corps (USMC) formally recognized the value of intuition in decision-making as early as 1989. The Corps has since incorporated the tenets of the RPD theory into their leader development doctrine and training. In 1999, General Charles Krulak, Commandant, USMC, issued Commandant Planning Guidance that presented his intent to cultivate Marines with the capability for “rapid decisionmaking under physical and emotional duress.”<sup>32</sup> General Krulak articulated the uncertainty and ambiguity of the military environment and correctly assessed it to resemble a naturalistic environment requiring an adaptation in Marine Corps decision-making.

General Krulak outlined three areas in which intuitive decision-making could be cultivated in the Marine Corps. They are repetitive skills training, self-study, and command climate.<sup>33</sup> Repetitive skills training is a formal training effort to help Marines gain experience in decision-making through forced repetition under adverse conditions. This training would be incorporated into all levels of decision-making as General Krulak recognized that the most inexperienced Marines may be the ones that would face the most daunting decisions. Self-study incorporates both the study of history plus the detailed assessment of decision-making processes that were used during a situation. General Krulak believed that this self-study would enhance a Marine’s ability to make “time sensitive” decisions.<sup>34</sup> Finally, command climate implied the development of a Corps leadership culture that would emerge and support the willingness of a Marine to make decisions. These thoughts by General Krulak mirror the concepts of the RPD model by promoting the development of intuition and experience of the Marine decision maker.

The Marine Corps has identified the importance of intuitive decision-making and has dedicated the resources to develop this decision-making capability of Marines. In 2001, the USMC published the *Expeditionary Maneuver Warfare* document that underscores producing leaders who have experience, are able to function in the VUCA environment, and have improved capacity to recognize patterns and make decisions quickly on an intuitive basis. This document also directs investment in doctrine, education, simulation activities, and battle space visualization tools as the means for developing leaders capable of effective decision-making.<sup>35</sup>

### **TELLING THE STORY**

One of the key constructs described by the RPD model is the rapid development of expert intuition. This expert intuition stems from increased experience and ability to recognize situation

similarities and discrepancies coupled with expression of this experience through storytelling. One of the most effective methods of storytelling in the military is historical writings commissioned and published by the military. One recent example is *On Point: The United States Army in Operation Iraqi Freedom (OIF)*, a study of events in OIF commissioned by former Army Chief of Staff, General Eric Shinseki, and released in 2004. The purpose of the book was to detail the Army's performance in joint warfare as it happened in Iraq.<sup>36</sup> This is a model for storytelling as it encompasses experiences of modern warfare that have now been disseminated to the force for application in future conflict. There are glimpses of the naturalistic decision-making environment in this story and the intrinsic "on the go" decision-making style that may be understood when described using the elements of the RPD model.

One event worth assessing is the story of the 101<sup>st</sup> Airborne Division (Air Assault) Aviation Brigade's deep attack against elements of the Iraqi Medina Division early in OIF. The mission was to employ the vast attack aviation assets in order to protect the flank of the 3<sup>rd</sup> Infantry Division as they attacked through the Karbala Gap. In *On Point*, the story followed the decision-makers as Lieutenant General (LTG) Wallace, the U.S. Army V Corps Commander, and Major General (MG) Petraeus, Commander, 101<sup>st</sup> Airborne Division (Air Assault). Earlier in the operation, the 11<sup>th</sup> Attack Helicopter Regiment (11<sup>th</sup> AHR), a V Corps asset, engaged the Medina Division with what was considered poor results to include heavy aircraft loss. Previous planning assumptions for the attack stemmed from the overwhelming success of attack aviation in the First Gulf War, yet the 11<sup>th</sup> AHR experienced unexpected resistance from the enemy that had adapted to the U.S. aviation tactics over the past dozen years. Coupled with this information and an unprecedented sand storm, MG Petraeus needed to make a decision on whether or not to execute the 101<sup>st</sup>'s mission.<sup>37</sup>

When queried directly about this decision, now LTG Petraeus stated that "the decision-making process for the deep attack was pretty straightforward—it was dictated by horrible weather...it was weather, not the 11<sup>th</sup> AHR's experience that forced delay in the mission."<sup>38</sup> He went on to describe that the leadership did, in fact, do a "superb" review with the 11<sup>th</sup> AHR of the mission they conducted, but that the 101<sup>st</sup> Aviation Brigade had already chosen different attack routes, different timings for enemy air defense suppression, and a different tactical approach designed to split the enemy assets and then "eat away" the enemy with close air support and other munitions packages.<sup>39</sup> LTG Petraeus affirmed the decision-making process he used was much accelerated and that he "tended to go with a directed course of action vice the normal lengthy process."<sup>40</sup>

LTG Petraeus detailed his decision-making procedures during that time. He met with LTG Wallace daily somewhere forward on the battlefield, discussed the current situation and the projected situation in the days to follow, received guidance and asset promises, passed the information on verbally to the subordinate commanders, and then went back to his staff to share the information with them. LTG Petraeus indicated that the key was to give his commanders guidance and intent as quickly as possible so that they could “chart the direction” of their units as quickly as possible.<sup>41</sup> Arguably the most insightful statements by LTG Petraeus on decision-making were that the “instinct of the commander becomes, perhaps, the paramount influence on decisions on future ops [operations]…and one key in decision-making is recognizing what’s different from seemingly similar situations in the past from which one might have drawn lessons and what’s the same/applicable.”<sup>42</sup> His thoughts express the attributes of an expert decision maker who has both the technical and leadership experience to clearly and accurately visualize the situation. While no one can anticipate all potential outcomes, an expert generally will see the most likely. Finally, LTG Petraeus stated that in a more time-friendly environment the MDMP process was valuable and was used to establish the initial cornerstone plans for the 101<sup>st</sup> in OIF. This exemplifies the complementary relationship between deliberate planning and rapid decision-making processes.<sup>43</sup>

The 101<sup>st</sup> scenario demonstrates an account of adaptive decision-making in a rapidly changing and uncertain environment. OIF, as depicted in *On Point*, offers a plethora of examples of rapid decision-making at each level of war. The value of this record of events is that the recent experiences in decision-making are already available for in-depth review and study by military commanders and other decision makers who undoubtedly perceive that their time to act is soon to come. This is the basis for developing and cultivating the decision-making capabilities necessary in the volatile, uncertain, complex and ambiguous military environment. It is encouraging to see this unfold.

## THE FUTURE

There is powerful evidence that the model of decision-making based on intuition and experience is valid and applicable to decision-making in the military. The persistent VUCA environment and the experiences gained in current military operations present a strong basis for action on the part of military leaders to embrace the concepts of this decision-making framework and incorporate them into the institutional structure of the military. A recent monograph by Leonard Wong discusses this need for senior military leaders to support intuitive decision-making because of the effects of the current operational environment on our junior officers.

Wong interviewed junior officers in combat units in various locations in Iraq during March 2004. His findings reveal that the junior officers felt that the experiences that they gained in Iraq made them better leaders, that is to say leaders who have acquired "adaptive capacity".<sup>44</sup> The junior leaders are learning to adapt to the VUCA environment and are spending less time worrying about establishing routines and more time determining how to exploit opportunities that present themselves.<sup>45</sup> The experience that these officers are gaining present an opportunity for the larger Army and military as this experienced group will return from Iraq and reintegrate into the institutional Army. Successful integration of this group of leaders is vital to their future contributions to the military and for the Army's vision of developing a creative and adaptive force of the future. Failure to integrate these leaders will result in the loss of their experience for the total Army.

In order to nourish the concepts of intuitive and creative thinking in military decision makers, the military must transfer the experience of combat into the bedrock of the Army system. Change begins in the field and becomes embedded into the system when reflected in institutional doctrine development and leadership training processes. Like the USMC, the Army is beginning to formally integrate the premises of analytical decision-making and intuitive decision-making into doctrine. This is evident in the just published Army Field Manual 5.0 (formerly FM 101-5), *Army Planning and Orders Production*. This manual clearly states that the MDMP and intuitive decision-making processes are not mutually exclusive and that the planning environment, time, and the experience level of the commander will drive which process is selected as most appropriate.<sup>46</sup> This acknowledgement of differences in decision-making is a move in a positive direction.

While the fact that both approaches to decision-making are addressed in a field manual indicates the Army's serious effort to begin a shift in leadership development, more work needs to be done to incorporate the concepts of intuitive decision-making into the military education and training systems. This could be done at all levels of formal leadership development from pre-commissioning sources such as West Point and the Reserve Officers' Training Program, the Officer Basic and Captain's Career Courses, and through the intermediate level leadership education culminating with the senior service colleges and general officer capstone programs. Each educational venue already contains leadership instruction in the curriculum. Improvement would require review and guidance to ensure that the learning opportunities present case studies, simulations, or other educational tools designed to foster intuitive and creative thinking. Historical repositories such as the SSI and the Center for Army Lessons Learned (CALL) are tremendously important in collecting, synthesizing, and disseminating the experienced based

stories as quickly as possible to be used in the educational process. *On Point* is a good example of how this is done. The outcome of this educational enhancement is to provide emerging leaders the opportunity to analyze decision-making situations for what worked and what did not work. The compilation of this analysis, plus experience in the field, will help to develop expertise that will facilitate improved decision-making in the future.

Enhancing formal leadership education programs is only one part of cultivating a culture of intuitive decision-makers. The military must create opportunities outside of formal school settings for leaders to develop experience and creative decision-making skills. This could be accomplished through the unit training programs and incorporated into training exercises and simulations at all levels. In the 101<sup>st</sup> Aviation Brigade, the S-3 and staff developed and rehearsed an abbreviated MDMP that prepared them for the rapid decision-making environment that they experienced in Iraq. This abbreviated process emphasized a clear commander's intent early in the process along with plenty of time to conduct a rehearsal. The Aviation Brigade Commander accepted this adapted process once the staff demonstrated its effectiveness in two exercises.<sup>47</sup> It is this kind of innovation and command support that will foster the development of creative decision makers.

The junior leaders returning from Iraq with the adaptive capacity to make quick decisions based on learned experience and intuition will need a garrison environment that continues to support creative decision-making. The system, for both active and reserve organizations, must allow decision makers to develop live or virtual training scenarios that reflect their experiences and allow the experts to share their stories. It will be this environment that will sustain soldiers through the constant demands placed on them. The Army has not had the current breadth of combat experienced personnel available since the First Gulf War and it would be foolish not to exploit the experience in the leadership development programs.

"For despite great prosperity in much of the world, enormous problems remain: of poverty, disease, pollution, oppression and violence. There is no guarantee we can solve any one of them. But now we know how to improve our chances. You look for success to build on, to carry forward, to combine in new ways to suit the situation. Maybe you will have the good fortune to hit on the right combination yourself."<sup>48</sup> The preceding quotation from Duggan accurately describes the world today and some of the more persistent challenges. The current and future military environment closely mirrors a more naturalistic or VUCA environment that is likely to persist for years to come. Commanders are faced with numerous decision-making pressures including limited time, information overload, very high stakes, dynamic conditions and considerable political-military interface. Despite the pressures, successful commanders

capitalize on expertise, experience, intuition and the ability to simulate the results of a chosen course of action with the goal to produce high quality decisions in an uncertain environment. Recent experience in Iraq and other operations is continuing to provide valuable experience and stories that need to be rapidly recorded and incorporated into the institutional doctrine, education, and training systems. An institutional emphasis on and continued support of intuitive decision-making will likely produce the next generation of effective decision-makers armed with the abilities to successfully lead the future force.

WORD COUNT= 5,970



## ENDNOTES

<sup>1</sup> U.S. Army War College, *Strategic Leadership Primer*, 2<sup>nd</sup> ed. (Carlisle Barracks, PA: U.S. Army War College, 2004), 13-14. VUCA is the acronym drawn from the first letters of volatile, uncertain, complex, and ambiguous and used to describe the external environment.

<sup>2</sup> U.S. Department of the Army, *Army Planning and Orders Production*, Field Manual 5-0 (FM 101-5) (Washington, D.C.: U.S. Department of the Army, 20 January 2005), 16.

<sup>3</sup> Max H. Bazerman, *Judgment in Managerial Decision-making*, 5<sup>th</sup> ed. (New York: John Wiley and Sons, 2002), 4.

<sup>4</sup> Christopher R. Paparone, "U.S. Army Decision-making: Past, Present and Future," *Military Review* (July-August 2001): 52.

<sup>5</sup> David J. Bryant, Robert D. G. Webb, and Carol McCann, "Synthesizing Two Approaches to Decision-making in Command and Control," *Canadian Military Journal* (Spring 2003): 31.

<sup>6</sup> Ibid.

<sup>7</sup> Gary Klein, *Sources of Power: How People Make Decisions* (Cambridge, MA: MIT Press, 1998), 20. Klein acknowledges Herbert Simon, a Nobel Prize winner in Economics, for his 1957 work that first described satisficing.

<sup>8</sup> Ibid., 4-5.

<sup>9</sup> Ibid.

<sup>10</sup> Ibid., 271.

<sup>11</sup> Ibid., 274.

<sup>12</sup> Ibid., 275.

<sup>13</sup> Bazerman, 38-39.

<sup>14</sup> Ibid.

<sup>15</sup> Klein, 24.

<sup>16</sup> Ibid., 24-27. Figure and information for the RPD model.

<sup>17</sup> Ibid., 31.

<sup>18</sup> Carl Von Clausewitz, *On War*, translated and edited by Michael Howard and Peter Paret (New Jersey: Princeton University Press, 1984), 102.

<sup>19</sup> William Duggan, *Napoleon's Glance: The Secret of Strategy* (New York: Nation/Avalon, 2002), 17.

<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

<sup>22</sup> Klein, 45.

<sup>23</sup> Ibid., 148.

<sup>24</sup> Ibid., 179.

<sup>25</sup> Jeffrey Record and W. Andrew Terrill, *Iraq and Vietnam: Differences, Similarities and Insights* (Carlisle Barracks, PA: Strategic Studies Institute, May 2004) vii.

<sup>26</sup> Karol G. Ross, Gary A. Klein, Peter Thunholm, John F. Schmidt, and Holly C. Baxter, "The Recognition-Primed Decision Model," *Military Review* (July-August 2004): 8.

<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid.

<sup>31</sup> John Sokolsky, "Adaptive Planning," briefing slides, Carlisle Barracks, PA: U.S. Army War College, 19 November 2004.

<sup>32</sup> Charles C. Krulak, "Cultivating Intuitive Decisionmaking," *Marine Corps Gazette* (May 1999): 18.

<sup>33</sup> Ibid., 21-22.

<sup>34</sup> Ibid., 22.

<sup>35</sup> U.S Department of the Navy, Headquarters, United States Marine Corps, *Expeditionary Maneuver Warfare: Marine Corps Capstone Concept* (Quantico, VA: Marine Corps Combat Development Command, 10 November 2001), 7.

<sup>36</sup> Gregory Fontenot, E.J. Degen, and David Tohn, *On Point: The United States Army in Operation Iraqi Freedom* (Fort Leavenworth, KS: Combat Studies Institute Press, 2004), xxi.

<sup>37</sup> Ibid., 191-193.

<sup>38</sup> David Petraeus <e-mail address withheld>, "Questions for LTG Petraeus," electronic mail message to Kelly Wolgast <kelly.wolgast@carlisle.army.mil>, 28 January 2005.

<sup>39</sup> Ibid.

<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

<sup>44</sup> Leonard Wong, *Developing Adaptive Leaders: The Crucible Experience of Operation Iraqi Freedom* (Carlisle Barracks, PA: Strategic Studies Institute, July 2004), 2.

<sup>45</sup> Ibid., 11.

<sup>46</sup> U.S. Department of the Army, 17.

<sup>47</sup> William A. Gayler <william.gayler@rucker.army.mil>, "Questions from Carlisle Barracks," electronic mail message sent to Kelly Wolgast <kelly.wolgast@carlisle.army.mil>, 27 January 2005.

<sup>48</sup> Duggan, 280.



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